

NARROMINE TO NARRABRI PROJECT

Biodiversity Investigation Plan – Summary for Community Consultative Committee

1 Introduction

The Inland Rail Narromine to Narrabri (N2N) Project is approximately 307 km long, with the majority being greenfield construction. The project is being assessed as State Significant Infrastructure (SSI) under the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act).

As part of the Environmental Impact Statement (EIS) being prepared for the N2N Project, a biodiversity impact assessment will be prepared. JacobsGHD (JGHD) have been awarded the contract for the N2N Project by ARTC, which includes the development of the Phase 2 feasibility design and EIS for the project. A Biodiversity Development Assessment Report (BDAR) is required to assess the impact of the Project on terrestrial biodiversity and to address the Secretary's Environmental Assessment Requirements (SEARs). The BDAR would be prepared under the NSW *Biodiversity Conservation Act 2016* (BC Act) in accordance with the *NSW Biodiversity Offsets Scheme* and Biodiversity Assessment Method (BAM). The SSI assessment and biodiversity assessment will also need to consider the requirements of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Under the BAM, the following are required:

- Mapping of native vegetation extent on the subject land and within a 500 metre buffer around the project
- Mapping the distribution of all Plant Community Types (PCTs) present, including variation in condition i.e. vegetation zones
- Identification of any threatened ecological communities (TECs)
- Survey of the appropriate number of vegetation integrity plots within each vegetation zone. There is a minimum plot requirement per vegetation zone, depending on area and condition
- Conduct threatened species surveys in appropriate times of the year and using appropriate effort. This relates in particular to 'species credit' species, for which separate credits are calculated as part of the biodiversity offset process. Species credits are the class of biodiversity credits created or required for the impact on threatened species that cannot be reliably predicted to use an area of land based on habitat surrogates. Species that require species credits are listed in the threatened species profile database.
- Once the impacts on biodiversity values have been identified, this information is used to quantify the biodiversity credits required to offset the residual impacts.

2 Land Access for Biodiversity Field Investigations

Phase 1 identified a study area between Narromine and Narrabri (~307km long) that varies in width between 500m and 5km. Phase 2 will identify the final rail corridor between 40-60m wide, which is an ongoing and staged process.

At the start of Phase 2, a Biodiversity Investigation Plan was prepared by JGHD in August 2018. This plan was developed on a Geographical Information System (GIS) based property access plan that identified

where private property access was currently available and prioritised areas where access is required for field investigations. Due to community concern about the project, there are considerable sections of the study area where ARTC have been unable to negotiate land access agreements, therefore access is not likely for field investigations in Phase 2. In summary, access is available for the Pilliga East State Forest areas (~100 km), Crown Land and Council road reserves, but only about 25% of private property for the rest of the study area.

3 Biodiversity Investigation Plan

In light of the limited private property access, the approach to the biodiversity impact assessment has been reviewed and modified in consultation with the NSW Office of Environment and Heritage (OEH), the regulatory agency responsible for biodiversity management. The NSW Department of Planning and Environment (DPE) and Commonwealth Department of the Environment and Energy (DoEE) are being kept informed of communications for inclusion and transparency. In November 2018, DoEE notified ARTC that the proposal is a controlled action and will be assessed by an accredited assessment process under the EP&A Act. Following consideration of the results of the biodiversity impact assessment by DPE in accordance with the EP&A Act, the Australian Minister for the Environment will make a separate decision whether or not to approve the proposal under the EPBC Act.

There are areas of native vegetation and threatened species habitat that cannot be assessed by on-ground surveys, and as such cannot be assessed strictly in accordance with the BAM. Given the property access constraints, JGHD has proposed a conservative approach to assessing biodiversity values and estimating the quantum of offset required by the project. This involves detailed field surveys within accessible portions of the study area and potentially using a combination of extrapolated information and benchmark data for inaccessible areas.

A Revised Biodiversity Investigation Plan was provided to OEH for review and feedback in late 2018. Following this feedback, ARTC developed a staged study approach, with regular engagement throughout the EIS process to maintain dialogue and identify potential study risks early. A summary of the staged study approach is provided in below.

STAGE	KEY TASKS AND ACTIVITIES
<p>Stage 1 Mapping and identification of Plant Community Types (PCTs)</p>	<ul style="list-style-type: none"> • Review of existing vegetation mapping • Rapid ground truthing of vegetation mapping • Review of flora survey information contained in NSW BioNet Atlas to assist with refining potential PCTs • Review of PCT classification mapping from other nearby projects where relevant • Sampling of flora plots in nearby native vegetation • Analysis of soil type, landscape position and land use maps in conjunction with existing vegetation mapping to determine potential PCT classification in inaccessible areas • Throughout the PCT classification process, review of high-resolution aerial photography and other relevant imagery to compare known PCTs in the study area from the rapid plot data collection stage with other vegetation patches where PCT classification is unknown
<p>Stage 2 Identifying vegetation zones and a methodology to meet the minimum plot requirements</p>	<p>Following completion of Stage 1 PCT identification, vegetation zones will be identified using:</p> <ul style="list-style-type: none"> • Plot data collected during field surveys • Rapid PCT field surveys, including identification of dominant canopy, shrub and groundcover species in patches of remnant native vegetation outside the study

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	<p>area but connected to patches within the study area (where no access is possible) e.g. roadside vegetation, other crown lands</p> <ul style="list-style-type: none"> • Analysis and review of high-resolution photography to compare known PCTs (where access has been granted) and condition to areas where no access is possible to allocate vegetation zones • Review of historical land use information and anecdotal information. <p>The areas for each vegetation zone would then be calculated based on the latest rail alignment options and taking into account areas of Category 1 and 2 land under the provisions of the BC Act and the NSW <i>Local Land Services Act 2013</i> (LLS Act). Simply put, Category 1 land is previously disturbed or cleared land with low biodiversity value. The BC Act excludes assessment of impacts to Category 1 lands for the determination of offset credit requirements. The rationale being that these lands are of low biodiversity value and do not meet the minimum requirements for offsetting, therefore can be excluded from the assessment under the BAM (also referred to as exempt land). Category 2 land has biodiversity value and must be included in the assessment (also referred to as regulated land).</p> <p>OEH outlined a process that could be used to identify the parcels of land in the rail alignment that are likely to be classified as Category 1. JGHD are currently preparing a categorisation map for OEH review. The impacts from clearing native vegetation and loss of habitat on Category 1 will be excluded from assessment under the BAM, and therefore no biodiversity credit obligation is created. By identifying which land is likely to be Category 1 and Category 2 land, ARTC will be able to develop a more targeted and robust biodiversity assessment process for the land where access has not been granted.</p> <p>In light of the current drought conditions, dry condition benchmark data will be used to define that a vegetation community meets a certain PCT condition. It is an upper and lower score based on various data and influences the amount of offset credits required. JGHD are currently preparing a proposed approach to establish project-specific dry condition benchmark data for OEH review.</p> <p>As the study area is further refined and the final rail corridor identified, this would be used to identify the final number and location of plots required for each vegetation zone. This will include identification of:</p> <ul style="list-style-type: none"> • The minimum number of plots required per vegetation zone area as per the BAM. • Identification of plots located within the final rail corridor and those located in the wider study area. • Where plots outside the final rail corridor in the study area are used, each plot will be identified as whether it is part of a connected patch of remnant vegetation and under the same management (e.g. part of the same private property paddock or extending into a roadside under different management and therefore likely to vary in condition). • Where the minimum number of plots cannot be met through field survey in the final rail corridor or representative PCTs in the wider study area, the use of benchmark data will be considered.

4 Agency Consultation / Next Steps

ARTC is committed to working with OEH and DPE to prepare a BDAR that fulfils regulatory requirements. As part of the staged study approach and to maintain transparency, ARTC will continue to seek detailed feedback from OEH at appropriate times during the preparation of the BDAR.

OEH has reviewed the Stage 1 and 2 methodologies and provided guidance on matters to be addressed during the preparation of the BDAR. On completion of Stage 2, ARTC will present the detailed field investigation findings to OEH and seek further advice prior to progressing preparation of the BDAR.

In February 2019, the DoEE was briefed on the proposed Biodiversity Investigation Plan. On completion of the BDAR, ARTC will meet with DoEE to present the key findings and recommended mitigation and management measures, including offsetting requirements.